Specialists' Certificate

1915-16

(11)

ENTRANCE REQUIREMENTS 1916-1917

Examinations based upon the work for Honour Matriculation or its equivalent, see secs. 61, 62a 62b, & 66

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Specialist Course	Minimum of 50%	Minimum of 40%
Classics	Greek, Latin	Mathematics 1,4 and at least one of German, French, Physics, Biology the language preferred
English & History (Cl.)	Greek, Latin, English	Mathematics 1,4 German or French required in addition
English & History (Mod.)	Latin, German, French	Mathematics 1,4
Modern Languages	German, French	Latin, Mathematics 1,4
Mathematics	Mathematics 1,4, 6	Latin, Physics, German or French
Science		Latin, Mathematics 1,4, 6, German or French and at least one of Physics, Biology, Chemistry

Note: If a candidate with pass Junior Matriculation enters with a Specialist's certificate in view he must on completing the First Year in the General Course repeat the same year in an Honour Course, making the time at least five years from the date of pass Junior Matriculation. In the case of students entering with the complete requirements of the University or with the complete Faculty Entrance the time involved is at least five years and almost always six years.

It is assumed that candidates have at least complete pass Junior Matriculation or have secured complete Matriculation on a combination of pass and honour papers under the regulations of the Matriculation Board governing such combination cases.

CLASSICS

Pass subjects of the various years

	University 1915-1916	Department (existing)	Department (proposed)
First Year			
	1. English	1. English	1. English
	2. Mathematics 1,4	2. Mathematics 1,4, 6	2. Mathematics 1,4
	3. Modern Language or half Science	3. Modern Language	3. Modern Language (4 hours)
	4. Trigonometry or other half Science (7-10)	4. Biology (4 hours) (13)	4. Biology (4 hours) (12)
Second Year			
	1. English or Modern Language or half Science	1. English	1. English
	2. English or other half Science (4)	2. Modern Language	2. History or Economics (3)
		3. History or Economics	
		4. Geology (4 hours) (10)	
Third Year			
	1. Classical Essays	1. Classical Essays	1. Classical Essays
Fourth Year			
	1. Classical Essays	1. Classical Essays	1. Classical Essays

a possible combination under univ. regs. + 2 hours but Math must be ∴ 10 hrs

MODERN LANGUAGES

Pass subjects of the various years

.....

University 1915-1916		Department (existing)		Department (proposed)		
First Year:						
1. Latin		1. Latin		1. Latin		
2. Mathematics 1,4		2. Mathematics		2. Mathematics		
3. Ancient History or Trigonometry	7	3. Ancient History		3. Ancient History		
		4. Biology	"	4. Biology	"	but Latin & Math must be off ∴ shows
Second Year:						
1. History	1	1. History		1. History	1	same as univ. reduction of 8 hours
		2. Latin (4 hours)				
		3. Geology (4 hours)	9			
Third Year:						
1. Philosophy	3	1. Philosophy	6	1. History	3	same amt of time if Phil & Hist alternative reduction of 3 hours
		2. History (3 hours)				
Fourth Year:						
1. Philosophy	3	1. Philosophy	6	1. History	3	do
		2. History (3 hours)				

Under existing agreement the Department requires the complete honour courses in English, German, French, in the Third and Fourth Year. The University requires the complete honour courses in two of the five languages and half the course in one other language. The English of this course calls for four hours, that for English and History for six hours. In Greek and Roman History of the First Year and in the History of the Second, Third and Fourth Years 50% of examination marks and also 50% of the combined term and examination marks.

There is also the possibility of securing a spec. certificate in Mod Lang. i.e. complete French or German with English or Italian or Spanish as the 3rd lang. of 20 hours in 3rd & 4th years

ENGLISH AND HISTORY (CLASSICAL OPTION)

Pass subjects of the various years

.....

University 1915-1916	Department (existing)	Department (proposed)
First Year:		
1. Modern Language	1. Modern Language	1. Modern Language (4 hours)
2. Mathematics 1,4	2. Mathematics 1,4 6	2. Mathematics 1,4
3. Trigonometry 7	3. Biology (4 hours) "	3. Biology (4 hours) 10 - 2 in math = 8 hrs
Second Year:		
1. Political Economy	1. Political Economy 2. Modern Language (4 hours) 3. Geology (4 hours)	1. Political Economy same as this shows off.
Third Year:		
1. Philosophy	1. Philosophy	1. Philosophy
Fourth Year:		
1. Philosophy	1. Philosophy	1. Philosophy

ENGLISH AND HISTORY (MODERNS OPTION)

Pass subjects of the various years

.....

University 1915-1916	Department (existing)	Department (proposed)	
First Year:			
1. Mathematics 1,4	1. Mathematics 1,4	1. Mathematics 1,4	
2. Trigonometry 3	2. Trigonometry	2. Biology (4 hours) 6	but Math off = 4 hrs
	3. Biology (4 hours) 7		
Second Year:			
1. Political Economy	1. Political Economy	1. Political Economy	same as Univ. reduction of 4 hours
	2. Geology (4 hours)		
Third Year:			
1. Philosophy	1. Philosophy	1. Philosophy	same as Univ.
Fourth Year:			
1. Philosophy	1. Philosophy	1. Philosophy	"

Under the existing agreement in the Third Year the Department requires honours in both German and French. The University requires one. In the Fourth Year the Department requires honours in either German or French, the University neither.

MATHEMATICS AND PHYSICS

Pass subjects of the various years

.....

University 1915-1916	Department (existing)	Department (proposed)
First Year:		
1. Latin	1. Latin	1. Latin
2. English	2. English	2. English
3. Modern Language 19	3. Modern Language 19	3. Modern Language (4 hours) 10 - Latin = 6 hours
Second Year:		
1. English	1. English	1. English
2. Modern Language 6	2. Modern Language	2 reduction of 8 hours
	3. Geology (4 hours) 10	
Third Year:		
1. History	1. History	1. History
Fourth Year:		
1. History	1. History	1. History

SCIENCE

The following Special Courses - Mathematics & Physics, Div. II (Physics), Mathematics & Physics, Div. III (Astronomy & Physics), Physics, Biology, Biological & Physical Sciences, Physiological & Biochemical Sciences, Chemistry & Mineralogy, Geology & Mineralogy, and Household Science Div. II constitute the group on which the academic qualification for Specialist Certificate in Science may be granted. A graduate in any one of these Courses who has obtained at least 66% at his examination of the Fourth Year may, if he has not passed in all the honour subjects set out in the accompanying schedule, be eligible for the academic qualification on passing in each of these with at least 50% on the subject or subjects.

The following Courses, or these Courses, under the same or other numbers, but with substantially the same content, shall constitute the minimum requirement in the subjects of Mechanics, Physics, Biology, Chemistry, Geology and Palaeontology, and Mineralogy and Petrography for the academic qualification for Specialist Certificate in Science of the Ontario Department of Education:-

	Page	Sec.	
Mechanics	124	1	Elementary Mechanics
Physics	125	1	Properties of Matter, Hydrostatics and Heat
	125	2	Laboratory Course in Properties of Matter, Mechanics, Hydrostatics and Heat
	125	3	Elementary Magnetism and Electricity
	126	4	Elementary Light
	126	5	Elementary Acoustics
	126	6	Laboratory Courses in Magnetism, Electricity, Light and Acoustics
Biology	130	1a	Elementary Biology
	130	3	A Laboratory Course in Elementary Zoology
	130	4	" " " " " Botany
	130	7	Invertebrate Zoology
	130	8	Phanerogamic Botany
	131	12	Zoological Collection
	132	18	Botanical Collections

	Page	Sec.	
Chemistry	137	1	Elementary Chemistry
	138	3a	Elementary Organic Chemistry
	138	7	Elementary Physical Chemistry
	138	13	Laboratory work in Elementary Quantitative Chemistry
	138	15	Analysis: Chemical Mechanics and Organic preparations
	138	24	Physico-chemical measurements etc.
Geology	139	1	As Pass work; Elementary Geology and Physiography
	139	3	Historical and Stratigraphical Geology and Palaeontology
	139	4	Practical Course to accompany No.3
Mineralogy	141	1	Elementary Mineralogy
	141	4	Blowpipe Analysis and Determinative Mineralogy

The numbers of the Courses, the short titles and pages are those found in the Calendar of the Faculty of Arts for the Session 1915-1916.

PHYSICS

Pass subjects of the various years

.....

University 1915-1916	Department (existing)	Department (proposed)
First Year:		
1. English	1. English	1. English
2. Latin	2. Latin	2. Latin
3. Modern Language	3. Modern Language (2+1)	3. A Modern Language (2)
4. Mathematics 1,4	4. Mathematics 1,4	4. Mathematics 1,4, 6
5. Trigonometry 11	5. Trigonometry 12	
Second Year:		
1. English or	1. English	1. English
Modern Language or	2. Modern Languages (2+1)	2. Modern Language (2)
Geology (Physiography) 5	3. Geology (Physiography) 6	3. Physiography 5
Third Year:		
1. English 3	1. English	
	2. History (3 hours) 6	1. History 3
Fourth Year:		
1. English 3	1. English 3	1. History 3

11 – Laboratory = 5 hours
time of all Science courses

same as now. 1 hour reduced

BIOLOGY

Core subjects of the various years

University 1915-1916	Department (existing)	Department (proposed)
First Year:		
1. English	1. English	1. English
2. Latin	2. Latin	2. Latin
3. Modern Language	3. Modern Languages (2+1)	3. A Modern Language (2)
4. Mathematics 1,4. 6	4. Mathematics 1,4	4. Mathematics 1,4, 6.
11	5. Trigonometry 12	
Second Year:		
1. English	1. English	1. English
2. Modern Language	2. Modern Languages (2+1)	2. A Modern Language (2)
3. Geology (Physiography) 5	3. Geology (Physiography) 6	3. Physiography 5
Third Year:		
1. English 3	1. English	1. History 3
	2. History (3 hours) 6	
Fourth Year:		
1. English 3	1. English	1. History 3
	2. History (3 hours) 6	

11 – lab + health = 5 hours

Same as last 1 hour reduction

CHEMISTRY AND MINERALOGY

Base subjects of the various years

University 1915-1916	Department (existing)	Department (proposed)	
First Year:			
1. English	1. English	1. English	
2. Latin	2. Latin	2. Latin	
3. Modern Language	3. Modern Languages (2:1)	3. A Modern Language (2)	
4. Mathematics 1,4	4. Mathematics 1,4	4. Mathematics 1,4, 6	
5. Trigonometry 11	5. Trigonometry 12		
Second Year:			
1. English	1. English	1. English	
2. Modern Language	2. Sc. German	2. A Modern Language (2)	same as this
3. Geology (Physiography) 5	3. Geology (Physiography)	3. Geology (Physiography)	
Third Year:			
1. Sc. German & French	1. Sc. German & French	1. History	reduced 1 subject
2. World History	2. History		
Fourth Year:			
1. Sc. German & French	1. Sc. German & French	1. History	reduced 4 hours
2. World History	2. Political Economy		
	3. History		

GEOLOGY AND MINERALOGY

Pass subjects of the various years

University 1915-1916	Department (existing)	Department (proposed)
First Year:		
1. English	1. English	1. English
2. Latin	2. Latin	2. Latin
3. Modern Language	3. Modern Languages (2+1)	3. A Modern Language (2)
4. Mathematics 1,4	4. Mathematics 1,4	4. Mathematics 1,4, 6
5. Trigonometry 11	5. Trigonometry 12	
Second Year:		
1. English	1. English	1. English
2. Modern Language	2. Modern Languages (2+1)	2. A Modern Language (2)
3. Geology (Physiography) 5	3. Geology (Physiography) 6	3. Geology (Physiography) 5
Third Year:		
1. English or World History	1. English	1. History 3 — reduced 3 hours
2. Sc. German or French 4	2. Sc. German and French	
	3. History (3 hours) 7	
Fourth Year:		
1. English or World History	1. English or Political Economy	1. History — reduced 1 hour.
2. Sc. German or French	2. Sc. German & French	

HOUSEHOLD SCIENCE

Table subjects of the various years

University 1915-1916	Department (existing)	Department (proposed)
First Year:		
1. English	1. English	1. English
2. Latin	2. Latin	2. Latin
3. Modern Language	3. Modern Languages (2(1)	3. A Modern Language (2)
4. Mathematics 1,4	4. Mathematics 1,4	4. Mathematics 1,4. 6
5. Trigonometry	5. Trigonometry	11 – Lat + math = 5 hours
13	6. Ancient History 13	
Second Year:		
1. English	1. English	1. English
2. Modern Language	2. German	2. A Modern Language (2) Same as Univ
3. History or Geology (Physiography)	3. French	3. Geology (Physiography)
5	4. History or Geology (Physiography)	5
	7	
Third Year:		
1. English	1. English	1. English ao
2. History or Political Economy or Philosophy	2. History or Philosophy or German or French	2. History
Fourth Year:		
1. English	1. English	1. English ao
2. History or Political Economy or Philosophy	2. History or Economics or German or French	2. History

Univ: Toronto
Oct 12/15

Dear Sir,

With reference to the subject of Mechanics, about which you wrote to me, I may say that the course indicated on page 40 of the Regulations of the Department of Education is sufficiently wide to enable specialists to teach the subject. But it would be well that the specialist should have at least an elementary knowledge of the Calculus.

And the subject would be much better taught if the specialist who taught it had a good training in Mathematics and Mechanics, such as is provided by our Honour course at the University

Yours truly
W. J. Dundon

The President

October 9th 5.

President R. A. Falconer,

University of Toronto,

Toronto.

Dear Mr. President:

In reply to your communication concerning the academic requirements for specialists' certificates in Science, the staff of Botany agree that our course in Plant Physiology is accessible to our science graduates if they are to teach effectively the subject of Biology in the High Schools and Collegiate Institutes of the province according to the present requirements of the Department of Education.

We have no special recommendation to offer with regard to the first part of your communication. In graduating in Biology as far as we can learn, have been especially well satisfied with the courses of the third and fourth years and we cannot see that the change to History will be of any special advantage to them. It is evidently a choice between two subjects, both of which are good.

Yours very truly,

J. H. Faull

CHEMICAL LABORATORY.
UNIVERSITY OF TORONTO,
TORONTO.

October 9 1915

The President of the University of Toronto,

Sir,

In reply to your enquiry dated Oct 7th, whether the following courses in Chemistry, viz:-

1. Elementary Chemistry
3a 2. Elementary Organic Chemistry
7. Elementary Physical Chemistry
13. Laboratory work in elementary Quantitative Chemistry
15. Analysis; Chemical Mechanics, and Organic Preparations
24. Physico-chemical Measurements, etc

are "adequate to enable the Specialist to teach efficiently the subject of Chemistry in the High Schools and Collegiate Institutes of the Province", I am of opinion that this amount of instruction in Chemistry is sufficient for a candidate who during his University course has taken a relatively much larger amount of work in one of the other Sciences.

With regard to the suggested requirement of History in the third and fourth years:- I presume that Specialists in Science are not required to teach History in the schools, and it seems to me that the possession of a B.A. degree from a reputable University should be considered sufficient evidence that an applicant for a teacher' position has acquired a liberal education.

I am, Sir,

very sincerely yours,

Professor of Physical Chemistry in the University of Toronto

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UNIVERSITY OF TORONTO

DEPARTMENT OF GEOLOGY

TORONTO, ONT.

Oct.9th.1915.

The President,

University of Toronto,

Dear Sir,

In answer to your letters of Oct.7th.to Professors Coleman and Walker re the requirements in Geology and Mineralogy for Specialists' certificates in Science we beg to state that the courses in Geology and Palaeontology,Nos.1,3,and 4 of the University Calendar for 1915-16 suffice for the teaching of the Physical Geography as indicated on pages 30 and 41 of "Regulations,Courses of Study,and Examinations of the High Schools and Collegiate Institutes,1914".

With regard to Mineralogy we are of the opinion that the work outlined on page 41 of the above"Regulations etc" can be undertaken by teachers who have taken courses Nos.1 and 4 of Mineralogy,page 141,University Calendar for 1915-16.

The introduction of Course No.2 in your letter to Professor Walker is an error and is not in accord with the requirements as indicated in previous University Calendars.

With regard to the requirements in General Course subjects for the graduating departments of Chemistry and Mineralogy II and Geology and Mineralogy we beg to state that the subjects stated by Mr. Brebner at the meeting of the staff in Science held on Wednesday,Oct.6th.meet with our approval. We are prepared to accept the substitution of History for English in the third and fourth years but we beg to state that our preference is for English.

Yours respectfully,

A.P.Coleman

T.L.Walker

Copy.

UNIVERSITY OF TORONTO
DEPARTMENT OF BIOLOGY

October 8th. 1915.

President R. A. Falconer,

University of Toronto.

Dear Mr. President;-

In reply to your letter of October 7th., concerning qualifications for Specialists' standing, I beg to say that we approve of the list of Courses required for Specialists in Science, with a minor qualification as stated, viz.:

1a. Elementary Biology
3. A laboratory course in Elementary Zoology.
4. " " " " " Botany.
7. Invertebrate Zoology
8. Phanerogamic Botany
12. Zoological Collections
18. Botanical Collections.

I believe that proficiency in these Courses represents an adequate training for Science teachers in the High Schools, providing, however, that the Specialist is a graduate of at least Second Class Honour standing in one of the Sciences recognized as forming the non-professional basis of the Specialist certificate in Science, viz.: in Biology, Chemistry, Physics or Geology and Mineralogy. I may say that it is on the latter account that I intend to send a personal objection to the Superintendent of Education, against the concession which is being asked, of a double Specialist in Science and Household Science for graduates in the Honour Department of Household Science.

With reference to the General Course subjects accompanying the Special Course in Biology, I approve of the list submitted by the Registrar, viz.

1st. and 2nd. Year, English.

UNIVERSITY OF TORONTO
DEPARTMENT OF BIOLOGY

1st. and 2nd. Year, Modern Language,
2nd. Year ..... Pass Geology,
3rd. and 4th. Year, Pass History.

I would suggest, however, the following modifications:

(1) That in the Second Year the prescription for either French or German should specify "texts or equivalent Courses in Scientific French (or German)".

(2) That since English in all four years has been a feature in the Biological Course, and since it does not appear feasible to include both English and History for the Third and Fourth Years, the Department of Education might consider whether it would be possible to accept English in place of History. This is a matter, however, on which no great importance should be placed.

Yours sincerely,

(Sgd.) B. A. Bensley.

DEPARTMENT OF PHYSICS

Toronto, Oct 14, 1915.

President Falconer,

University of Toronto.

Dear President Falconer,

In reply to your letter of October 7 I beg to state that in the opinion of myself and my staff it will be satisfact at present if the requirements for specialist certificates in Science include the following work in Physics:(See Calendar, Faculty of Arts 1915-16, pp. 125-126.)

1. Properties of Matter, Hydrostatics and Heat.
2. Laboratory Courses in Properties of Matter, Mechanics, Hydrostatics and Heat.
3. Elementary Magnetism and Electricity.
4. Elementary Light.
5. Elementary Acoustics.
6. Laboratory Courses in Magnetism, Electricity, Light and Acoustics.

Yours faithfully,

J. C. McLennan

DEPARTMENT OF PHYSICS

Toronto, Oct 14, 1916.

President Falconer,

University of Toronto

Dear President Falconer,

I beg to acknowledge the receipt of your communication of October 18 respecting the proposed placing of lectures at the end of the first week in April, and this is just a line to say that I shall announce it to our staff.

Yours faithfully,

J C McLennan

(Enclosure)

JOHN SEATH
SUPERINTENDENT OF EDUCATION

ONTARIO
DEPARTMENT OF EDUCATION
SUPERINTENDENT'S
OFFICE

Toronto, October 14th, 1915.

Dear President Falconer,-

In accordance with my offer over the 'phone, I am sending you herewith four copies of the circular regarding the War. As I said, it would be a convenience for the schools if the University concurred in the issue of the circular, especially as we prescribe the course whether the pupils are candidates for Departmental or University examinations. The effect of the University concurrence would be that the War would be recognized at the Matriculation as well as the Departmental examinations next Summer. I may explain that the first draft of the circular was prepared by Dean Pakenham and certain teachers of History whom he consulted on the subject.

A prompt settlement of the question I am raising is very desirable.

I may add that, of course, we shall be very glad, indeed, to have any suggestions you can offer for the improvement of the circular.

Yours very truly,

John Seath

President Falconer,
University of Toronto,
Toronto.

University of Toronto

Dec. 13 1910

My dear President:

I have only now had the opportunity to answer Dr Parker's queries in the inclosed letter addressed to you

1 I have arranged with the Classical Dept to put mediaeval history on the Classical Course in the Second Year.

2 I have arranged with the Modern Languages Staff that they shall give the history stuff in a course to comprise:

First year mediaeval history
Second " { mediaeval and M. E. History
The 17th Century in France and previous
Third " The 19th Century in France and previous
Fourth " The 19th Century in France Germany & England

3 The plan of the English and History Courses includes the abandonment of Foreign Languages in the Fourth Year as a subject of Examination. This is applied to English and Ancient (Modern) Languages completely and to the English and History (Classes, with the exception of a study of Aristotle's <u>Poetics</u>, claimed on ~~account~~ account rather of the subject than of the language.

Yours very truly

George M. Wrong

The President,
Univ. of Toronto,
Toronto.

JOHN SEATH
SUPERINTENDENT OF EDUCATION

ONTARIO
DEPARTMENT OF EDUCATION
SUPERINTENDENT'S
OFFICE

Toronto, December 2nd, 1915.

Dear President Falconer,-

I shall feel obliged if you obtain for me at your early convenience information on the following points:

(1) The Modern History to be provided for the Specialist's Course in Classics. Professor Wrong was to be consulted on this subject.

(2) The Modern History Course for Specialist's certificate in Moderns and History.

The proposal of the Moderns men was that we should recognize some of the Modern History which they take up as part of their course. Professor Wrong was to be consulted on this subject.

(3) The reduced provision for Classics and Moderns in the Third and Fourth Years of the two English and History Courses.

The courses referred to in (1) and (2) above I discussed with yourself and the Classical and Moderns Committees that met me some weeks ago; the courses referred to in (3) above I discussed with Professor Wrong, and the understanding was that the two courses would be made symmetrical.

JOHN SEATH
SUPERINTENDENT OF EDUCATION

ONTARIO
DEPARTMENT OF EDUCATION
SUPERINTENDENT'S
OFFICE

I am preparing for the consideration of this Department a statement of the courses proposed for Specialists' certificates, and should like to have it up-to-date.

I am writing to you instead of to Mr. Brebner as I understand he is absent and as the Assistant Registrar is probably not so familiar with the situation as you are.

Yours very truly,

John Seath

President Falconer,
University of Toronto,
Toronto.

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Victoria College.

Toronto, Canada.

Dec. 16. 1915

My dear President Falconer:

Enclosed you will find a draft of what I had the honor of presenting to you yesterday. The outline was revised last night in wording but not in change of principle. Dr Needler is still to see it. We shall have an extended syllabus for the guidance of our students.

I may say that all the members of the staff are looking forward to the work with very pleasurable anticipations.

Yours sincerely,

V. E. Henning.